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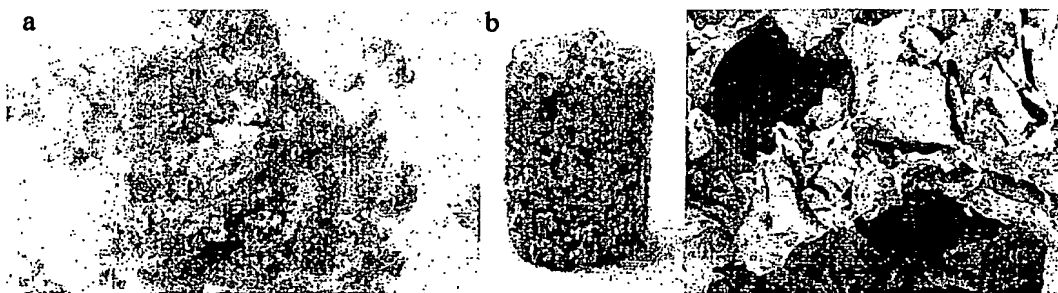
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(54) Title: HYDROGEL POROGENS FOR FABRICATING BIODEGRADABLE SCAFFOLDS



(57) Abstract: Hydrogel microparticles with entrapped liquid are used as the porogen to reproducibly form interconnected pore networks in a porous scaffold. In one embodiment, a biodegradable unsaturated polymer, a crosslinking agent, and a porogen comprising biodegradable hydrogel microparticles are mixed together and allowed to form a porous scaffold in a mold or in a body cavity. Example biodegradable unsaturated polymers include poly(propylene fumarate) and poly( $\epsilon$ -caprolactone-fumarate). The crosslinking agent may be a free radical initiator, or may include a free radical initiator and a monomer capable of addition polymerization. Example hydrogel microparticles include uncrosslinked or crosslinked collagen, an uncrosslinked or crosslinked collagen derivative, and an uncrosslinked or crosslinked synthetic biodegradable polymer such as oligo(poly(ethylene glycol) fumarate).

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